

ABSTRACT

2 Methods for immunizing, and immunogen pharmaceutical compositions for eliciting a
3 heterologous immune response to HIV-1 in an animal, preferably a human, are
4 provided, utilizing a modified HIV-1 envelope protein or fragment or DNA encoding a
5 modified HIV-1 envelope protein or fragment, the modified protein having a HIV-1
6 envelope protein V2 region deletion. A humoral response against heterologous HIV-1
7 strains is achieved
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